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| 10/580,976 | 05/31/2006 | Jens Foegler | 03/102 K | 9269 |
| 38263 | 7590 | 03/17/2009 | EXAMINER | |
| PROPAT, L.L.C. 425-C SOUTH SHARON AMITY ROAD CHARLOTTE, NC 28211-2841 | | | JACOBSON, MICHELE LYNN | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/580,976 | Applicant(s) FOEGLER ET AL. | |
| | Examiner MICHELE JACOBSON | Art Unit 1794 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/31/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Examiner Notes

1. Any objections and/or rejections made in the previous action, and not repeated below, are hereby withdrawn.

Information Disclosure Statement

2. The examiner apologizes for the oversight of the information disclosure statement filed 5/31/06 in the previous office action. This information disclosure statement has been considered and an annotated copy has been included with the instant office action.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-8, 10-17 and 19-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozima et al. UK Patent No. 1,544,155 (hereafter referred to as

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Ozima) and Hammer et al. WO98/34490 (U.S. Patent No. 6,902,783 used herein for translation and reference, hereafter referred to as Hammer).

5. Ozima teaches protein coated films that are particularly useful for packaging animal meat paste products such as sausage to improve the peel off properties of the film. (Col. 1, lines 18-21) The disclosed films are recited to comprise regenerated cellulose film coated with a protein based solution. (Col. 4, lines 1-10) The solution comprises proteins, such as soy protein, casein, collagen and gelatin and plasticizer. (Col. 3, lines 21-25, Col. 5, lines 21-23)

6. Ozima is silent regarding the instantly claimed protein composition.

7. Hammer teaches an edible shaped body in the form of a flat or tubular film based on plastifiable biopolymers or cleavage products or derivatives thereof and/or synthetic polymers of natural monomers. (Col. I 1, lines 52-55) Preferred examples of the plastifiable biopolymers include extrudable gelatins and other natural proteins, alginic acids and alginates and carrageenan. (Col. 2, lines 38-46) The content of the biopolymers is generally from 10% to 90% by weight based on the total weight of the shaped body. (Col. 2, lines 54-58) Preferably, two or more of the starting biopolymers are used together. (Col. 2, lines 59-60) They are expediently uniformly mixed and plastified at relatively high temperatures by relatively long kneading in a twin-screw extruder in the presence of a plasticizer, a plasticizing aid (=lubricant), a hardener (=crosslinker) and, if appropriate, a filler. (Col. 2, lines 60-64) The composition is also recited to include pigments. (Claim 13)

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8. Hardeners or crosslinkers which can be used include caramel (caramelized sugar, maillose) and dialdehydes (especially glyoxal and glutardialdehyde). (Col. 3, lines 14-17) The content of crosslinkers is generally from 0.2 to 30% by weight. (Col. 3, line 27)

9. The tubes are recited to be extruded and can be treated internally and externally to modify their properties. Generally, the tubes are gathered in sections and the resultant shirred sticks are processed on conventional machines. The seamless tubular films are particularly suitable as sausage casings, in particular for small sausages. In addition, the shaped bodies of the invention are also suitable for packaging other foods, e.g. cheese. (Col. 4, lines 33-47) The composition of the invention may also be utilized in a multilayer film including three layers wherein only the central layer comprises fibers. (Claim 14)

10. In another embodiment, a thermoplastic sheet was produced from the inventive composition which was used to wrap meat products such as cooked ham. The sheet was also recited to be covered with a net for cooking the ham which presumably provided additional reinforcement. (Col. 5, lines 30-35) The film was recited to be oxygen and smoke permeable while having low liquid and fat permeability. (Col. 5, lines 33-35)

11. Ozima and Hammer are both directed towards sausage casings. Ozima clearly teaches that it was known in the art at the time the invention was made to utilize gelatin based protein coatings in order to improve the peel off properties of the film. It would have been obvious to one having ordinary skill in the art at the time the invention was

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made to have substituted the composition recited by Hammer for the protein based coating composition recited by Ozima since these compositions would have been recognized to perform equivalent functions. One of ordinary skill would have additionally be motivated to utilize the composition of Hammer since, being cross-linked, it would have provided extra structural stability to the sausage casing produced which is beneficial during the stuffing and cooking process.

12. The obvious utilization of the composition of Hammer as the protein coating for the regenerated cellulose film (i.e. nonwoven fabric layer) of Ozima would have produced the same invention as claimed in claims 1, 2, 4, 6, 23 and 25.

13. Regarding claims 3, 19 and 20-22: While the composition disclosed by Hammer is recited to be extruded, one of ordinary skill would have recognized that it could also be utilized as a coating composition for reinforcing layers such as recited by Ozima. The examiner takes official notice that it is well known in the sausage casing art that tubular casings may either be formed seamlessly by coextrusion of the layers or they may be formed with a seam by forming sheet into a tubular shape. Instead of extruding the inventive composition of Hammer as a tube, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have applied it as a coating to sheet of reinforcing fabric material. The coating could then be said to impregnate the fabric material. This would have been the same as the invention claimed in claims 3 and 19. The obvious formation of this impregnated sheet into a tubular casing would have produced a casing with one longitudinal seam which is the same as the invention claimed in claim 20. Such a tube would have been produced by

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the same method as that claimed in claim 22. Additionally, the examiner takes official notice that it is well known in the sausage casing art to support preformed tubular casings with air so that they may be internally or externally coated. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have supported a preformed reinforcing fabric tubular article with air while coating it with the composition recited by Hammer. The obvious utilization of this method step would have produced a method the same as that claimed claim 21.

14. Regarding claim 5: Ozima does not recite a weight for the reinforcing net disclosed. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected a reinforcing fabric layer with an appropriate weight depending on the amount of strength required. The obvious optimization of the weight of the reinforcing layer would have produced the same invention as claimed in claim 5.

15. Regarding claims 7 and 26: Hammer recites that the protein is present in an amount of from 10% to 90% by weight based on the total weight of the composition which overlaps or encompasses the ranges claimed in claims 7 and 26. "In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976)". (MPEP 2144.05)

16. Regarding claims 8 and 10-12: Hammer recites that the composition preferably comprises two or more plastifiable biopolymers. Alginate and carrageenan (a branched polysaccharide) are recited to be useful plastifiable biopolymers along with gelatin.

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While Hammer does not specifically disclose that alginate and carrageenan act as plasticizers, they are the same compounds claimed by applicant as plasticizers and therefore would be expected to perform the same function. Therefore, the composition recited by Hammer is the same as the claimed in claims 8, 10 and 11. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have optimized the ratio of gelatin to alginate or carrageenan. Hammer teaches that previously it had not been possible to give alginate based sausage casings the stability necessary. Owing to the action of the sausage emulsion and brine the poorly soluble calcium salt is gradually converted into the readily soluble sodium salt of alginic acid. Alginate casings as a result lose their strength. (Col. 1, lines 29-34) In light of this teaching, one of ordinary skill would not have sought to employ alginate as the majority plastifiable biopolymer and would have utilized it in amounts that were less than 50%. The obvious use of alginate in amounts less than 50% would have produced the invention claimed in claim 12.

17. Regarding claims 13 and 14: Hammer specifically recites caramel, glyoxal and glutardialdehyde as crosslinkers.

18. Regarding claims 15 and 16: Hammer specifically recites that pigments may be used as claimed in claim 15. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have optimized the amount of pigment or dye used depending on the intensity of the resulting color desired. Such an optimization of the amount of pigments would have produced the invention as claimed in claim 16.

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19. Regarding claim 17: The examiner takes official notice multilayer sausage casings are universally known in the sausage casings arts comprising layers that do not comprise proteins. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have disposed an additional non-protein barrier layer or protective layer to the casing of Ozima modified with Hammer which would have produced the same invention as claimed in claim 17.

20. Regarding claim 24: Hammer clearly recites that the casing can be shirred. The examiner takes official notice that it is well known in the sausage art to provide means for separating individual sausage links that include metal or plastic clips, tying and sewing. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized any one of these techniques to separate the sausage links produced using the modified sausage casing of Hammer. The obvious utilization of these separation techniques would have produced a method the same as that claimed claim 24.

21. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozima et al. UK Patent No. 1,544,155 (hereafter referred to as Ozima) and Hammer et al. WO98/34490 (U.S. Patent No. 6,902,783 used herein for translation and reference, hereafter referred to as Hammer) and Gord et al. U.S. Patent Application Publication No. 2002/0064580 (hereafter referred to as Gord).

22. Ozima and Hammer teach what has been recited above but are silent regarding the addition of polyvinyl acetate or polyacrylate.

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23. Gord teaches a cellulose fiber based sausage casing coated with a solution comprising a protein such as gelatin and other additives. (Para. 18, 19) Polyvinyl acetate and polyacrylate are recited to be useful additives for the protein solution because they impart higher smoke permeability to the casing. (Para. 21)

24. Ozima and Gord are directed to casings comprising cellulose fibers. Ozima, Hammer and Gord are all directed towards sausage casings comprising protein based films. One of ordinary skill would have been motivated to utilize polyvinyl acetate or polyacrylate as an additional additive in the composition recited by Hammer in order to impart higher smoke permeability to the casing. The obvious use of polyvinyl acetate or polyacrylate as an additive in the composition of Hammer in order to increase the smoke permeability of the casing would have produced the invention claimed in claim 9.

25. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozima et al. UK Patent No. 1,544,155 (hereafter referred to as Ozima) and Hammer et al. WO98/34490 (U.S. Patent No. 6,902,783 used herein for translation and reference, hereafter referred to as Hammer) and Jon et al. U.S. Patent No. 5,955,126 (hereafter referred to as Jon).

26. Ozima and Hammer teach what has been recited above but are silent regarding the addition of a polyvinylidene chloride copolymer layer.

27. Jon teaches a polyvinylidene chloride copolymer coated fiber reinforced cellulose casing coated with a solution comprising a protein. (Claims 1 and 6)

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28. Ozima and Jon are both directed towards sausage casings comprising a fiber reinforced cellulose layer. Ozima, Hammer and Jon are all directed towards sausage casings. As stated above, it is universally known in the sausage casing arts to utilize multilayer casings. Jon evidences that polyvinylidene chloride layers were known to be useful in combination with protein coated reinforced cellulose casings. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized a polyvinylidene chloride layer as an additional layer in the casing recited by Ozima. The utilization of such a layer would have produced the casing as claimed in claim 18.

Response to Arguments

29. Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELE JACOBSON whose telephone number is (571)272-8905. The examiner can normally be reached on Monday-Thursday 8:30 AM-7 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571)272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/
Supervisory Patent Examiner, Art Unit 1794

Michele L. Jacobson
Examiner /M. J./
Art Unit 1794